

WHAT IS CLAIMED IS:

1. An optical disc driver comprising:

5 a data processor for processing data read out from an inserted disc and data to be recorded on the disc;

10 a memory section for storing the data in the unit of an error correction code (ECC) block read/written by the data processor;

15 a buffer for encoding and storing data blocks to be recorded on the disc by the data processor; and

20 a controller for controlling the data processor, and controlling a command to record on the disc the data of the ECC blocks stored in the buffer if the number of the ECC blocks stored in the buffer becomes larger than the predetermined number of the ECC blocks.

2. A data recording method for an optical disc driver comprising the steps of:

25 (a) receiving a data recording command;

(b) analyzing the received data recording command, and encoding data to be recorded in a corresponding user region block;

30 (c) storing the encoded data in the unit of an error correction code (ECC) block in a buffer; and

35 (d) recording the data of the ECC blocks stored in the

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buffer if the number of the ECC blocks stored in the buffer is  
larger than the predetermined number of the ECC blocks.

3. The data recording method as claimed in claim 2, wherein  
5 in encoding the data to be recorded at step (b), if the data to  
be recorded is the data in the unit of a sector, the data of  
the ECC block of the user region corresponding to the sector is  
reproduced, the data to be newly recorded is inserted into the  
data of the reproduced ECC block, and the processed ECC block  
10 is encoded.

4. The data recording method as claimed in claim 2, wherein  
15 in encoding the data to be recorded at step (b), if the data to  
be recorded is the data in the unit of an ECC block, the ECC  
block data of the user region is not reproduced, but the ECC  
block to be recorded is encoded.

5. The data recording method as claimed in claim 2, wherein  
20 the ECC block data stored in the buffer at step (c) is recorded  
if no data recording command is newly received until a  
predetermined time elapses from the time when the data  
recording command is received.

6. An optical disc driver comprising:  
25 a data processor for processing data read out from an

inserted disc and data to be recorded on the disc;

a memory section for storing the data in the unit of an error correction code (ECC) block read/written by the data processor;

5 a buffer for encoding and storing data blocks to be recorded on the disc by the data processor; and

a controller for controlling the data processor, and in the event that the data recording commands which deviate from boundaries of the ECC blocks are sequentially received, performing a data reproduction only with respect to a first data recording command and a last data recording command, and performing an encoding of the respective ECC blocks with respect to sequential intermediate data recording commands without performing the data reproduction.

15 7. A data recording method for an optical disc driver comprising the steps of:

(i) receiving a data recording command;

(j) analyzing the data recording command received at step

20 (i), and detecting a user region block where the data is recorded;

(k) detecting an error correction code (ECC) block  $E_c$  corresponding to the user region block detected at step (j);

(l) judging whether or not the ECC block  $E_c$  detected at 25 step (k) is connected to an ECC block  $E_p$  processed in

accordance with a previously received data recording command;

5 (m) if it is judged that the ECC block Ec is connected to the ECC block Ep processed in accordance with a previously received data recording command, judging whether or not an encoding of the data to be recorded in the ECC block Ec is performed;

10 (n) if it is judged at step (m) that the encoding of the data to be recorded in the ECC block Ec is not performed, inserting the data to be recorded in the ECC block Ec among the data received at step (i) into a predetermined position of the ECC block Ec waiting to perform the encoding; and

15 (o) encoding and recording the data of the ECC block Ec processed at step (n).

20 8. The data recording method as claimed in claim 7, wherein if it is judged that the ECC block Ec is not connected to the ECC block Ep processed in accordance with a previously received data recording command as a result of judgement at step (l), the data of the ECC block Ec is reproduced.

25 9. The data recording method as claimed in claim 7, wherein if it is judged that the encoding of the data to be recorded in the ECC block Ec is performed as a result of judgement at step (m), the data of the ECC block Ec is reproduced.

10. An optical disc drive system comprising:

    a disc;

    a data processor for processing data read out from the disc and data to be recorded on the disc;

5       a memory section for storing the data in the unit of an error correction code (ECC) block read/written by the data processor;

    a buffer for encoding and storing data blocks to be recorded on the disc by the data processor;

10      a controller for controlling the data processor, controlling a command to record on the disc the data of the ECC blocks stored in the buffer if the number of the ECC blocks stored in the buffer becomes larger than the predetermined number of the ECC blocks, and in the event that data recording commands which deviate from boundaries of the ECC blocks are sequentially received, performing a data reproduction only with respect to the first data recording command and the last data recording command, and performing an encoding of the respective ECC blocks with respect to the sequential intermediate data recording commands without performing the data reproduction;

15      and

    a host for requesting the data to the controller.